

MD 193 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

PROPOSED LED MODULES

1, 4
R
Y
G
12"

EXISTING SIGNALS TO REMAIN

2, 3, 5, 6
R
Y
G
12"

PROPOSED LED SIGNALS

7, 8, 9, 10
16" LED
COUNTDOWN
PEDESTRIAN
SIGNAL

EXISTING VIDEO
DETECTION

a, b

EXISTING SIGNS TO REMAIN

11

12
ONLY

13

14
Univ. Blvd
100' W

15
EAST
193

PROPOSED ACCESSIBLE
PUSHBUTTON AND SIGN

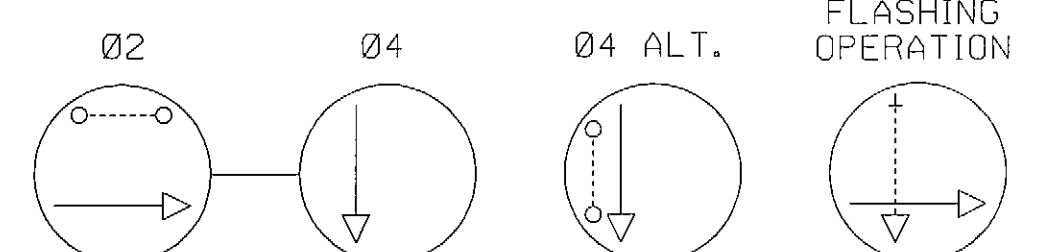
16
PUSH BUTTON
TO CROSS
UNIVERSITY BLVD.
R10-3(1)
(9"x15")

17
PUSH BUTTON
TO CROSS
UNIVERSITY BLVD.
R10-3(1)
(9"x15")

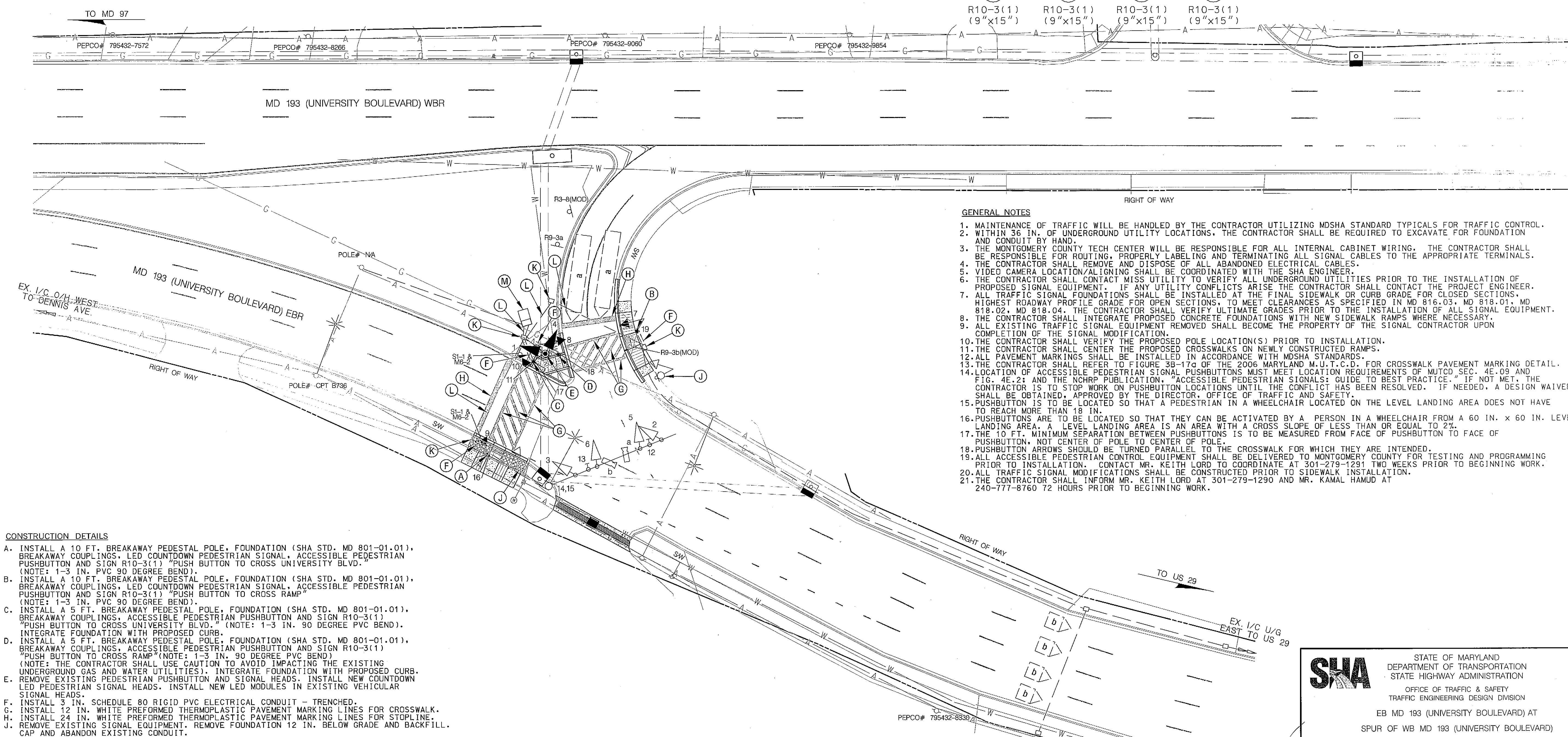
18
PUSH BUTTON
TO CROSS
RAMP
R10-3(1)
(9"x15")

19
PUSH BUTTON
TO CROSS
RAMP
R10-3(1)
(9"x15")

NEMA PHASING



NOTE:
PHASES ASSOCIATED BY A DASHED LINE
MAY/WILL OPERATE CONCURRENTLY.
PHASES ASSOCIATED BY A SOLID LINE
WILL NOT OPERATE CONCURRENTLY.



GENERAL NOTES

1. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING MSHA STANDARD TYPICALS FOR TRAFFIC CONTROL.
2. WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR FOUNDATION AND CONDUIT BY HAND.
3. THE MONTGOMERY COUNTY TECH CENTER WILL BE RESPONSIBLE FOR ALL INTERNAL CABINET WIRING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING, PROPERLY LABELING AND TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS.
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED ELECTRICAL CABLES.
5. VIDEO CAMERA LOCATION/ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
6. THE CONTRACTOR SHALL CONTACT MISS UTILITY TO VERIFY ALL UNDERGROUND UTILITIES PRIOR TO THE INSTALLATION OF PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
7. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS. HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
8. THE CONTRACTOR SHALL INTEGRATE PROPOSED CONCRETE FOUNDATIONS WITH NEW SIDEWALK RAMPS WHERE NECESSARY.
9. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE SIGNAL MODIFICATION.
10. THE CONTRACTOR SHALL VERIFY THE PROPOSED POLE LOCATION(S) PRIOR TO INSTALLATION.
11. THE CONTRACTOR SHALL CENTER THE PROPOSED CROSSWALKS ON NEWLY CONSTRUCTED RAMPS.
12. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MSHA STANDARDS.
13. THE CONTRACTOR SHALL REFER TO FIGURE 3B-17d OF THE 2006 MARYLAND M.U.T.C.D. FOR CROSSWALK PAVEMENT MARKING DETAIL.
14. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD, SEC. 4E.09 AND FIG. 4E-2; AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL THE CONFLICT HAS BEEN RESOLVED. IF NEEDED, A DESIGN WAIVER SHALL BE OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
15. PUSHBUTTON IS TO BE LOCATED SO THAT A PEDESTRIAN IN A WHEELCHAIR LOCATED ON THE LEVEL LANDING AREA DOES NOT HAVE TO REACH MORE THAN 18 IN.
16. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR FROM A 60 IN. x 60 IN. LEVEL LANDING AREA. A LEVEL LANDING AREA IS AN AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
17. THE 10 FT. MINIMUM SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
18. PUSHBUTTON ARROWS SHOULD BE TURNED PARALLEL TO THE CROSSWALK FOR WHICH THEY ARE INTENDED.
19. ALL ACCESSIBLE PEDESTRIAN CONTROL EQUIPMENT SHALL BE DELIVERED TO MONTGOMERY COUNTY FOR TESTING AND PROGRAMMING PRIOR TO INSTALLATION. CONTACT MR. KEITH LORD TO COORDINATE AT 301-279-1291 TWO WEEKS PRIOR TO BEGINNING WORK.
20. ALL TRAFFIC SIGNAL MODIFICATIONS SHALL BE CONSTRUCTED PRIOR TO SIDEWALK INSTALLATION.
21. THE CONTRACTOR SHALL INFORM MR. KEITH LORD AT 301-279-1290 AND MR. KAMAL HAMUD AT 240-777-8760 72 HOURS PRIOR TO BEGINNING WORK.

CONSTRUCTION DETAILS

- A. INSTALL A 10 FT. BREAKAWAY PEDESTAL POLE, FOUNDATION (SHA STD. MD 801-01.01), BREAKAWAY COUPLINGS, LED COUNTDOWN PEDESTRIAN SIGNAL, ACCESSIBLE PEDESTRIAN PUSHBUTTON AND SIGN R10-3(1) "PUSH BUTTON TO CROSS UNIVERSITY BLVD." (NOTE: 1-3 IN. PVC 90 DEGREE BEND).
- B. INSTALL A 10 FT. BREAKAWAY PEDESTAL POLE, FOUNDATION (SHA STD. MD 801-01.01), BREAKAWAY COUPLINGS, LED COUNTDOWN PEDESTRIAN SIGNAL, ACCESSIBLE PEDESTRIAN PUSHBUTTON AND SIGN R10-3(1) "PUSH BUTTON TO CROSS RAMP" (NOTE: 1-3 IN. PVC 90 DEGREE BEND).
- C. INSTALL A 5 FT. BREAKAWAY PEDESTAL POLE, FOUNDATION (SHA STD. MD 801-01.01), BREAKAWAY COUPLINGS, ACCESSIBLE PEDESTRIAN PUSHBUTTON AND SIGN R10-3(1) "PUSH BUTTON TO CROSS UNIVERSITY BLVD." (NOTE: 1-3 IN. 90 DEGREE PVC BEND). INTEGRATE FOUNDATION WITH PROPOSED CURB.
- D. INSTALL A 5 FT. BREAKAWAY PEDESTAL POLE, FOUNDATION (SHA STD. MD 801-01.01), BREAKAWAY COUPLINGS, ACCESSIBLE PEDESTRIAN PUSHBUTTON AND SIGN R10-3(1) "PUSH BUTTON TO CROSS RAMP" (NOTE: 1-3 IN. 90 DEGREE PVC BEND). (NOTE: THE CONTRACTOR SHALL USE CAUTION TO AVOID IMPACTING THE EXISTING UNDERGROUND GAS AND WATER UTILITIES). INTEGRATE FOUNDATION WITH PROPOSED CURB.
- E. REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND SIGNAL HEADS. INSTALL NEW COUNTDOWN LED PEDESTRIAN SIGNAL HEADS. INSTALL NEW LED MODULES IN EXISTING VEHICULAR SIGNAL HEADS.
- F. INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT - TRENCHED.
- G. INSTALL 12 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES FOR CROSSWALK.
- H. INSTALL 24 IN. WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES FOR STOPLINE.
- J. REMOVE EXISTING SIGNAL EQUIPMENT. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL. CAP AND ABANDON EXISTING CONDUIT.
- K. USE EXISTING HANDHOLE.
- L. USE EXISTING CONDUIT.
- M. USE EXISTING BASE MOUNTED CABINET.

UTILITY LEGEND

— E — E —	ELECTRIC CABLES	— SD — SD —	STORM DRAIN
— A — A —	AERIAL CABLES	— G — G —	GAS MAIN
— T — T —	TELEPHONE CABLES	— W — W —	WATER MAIN
— F — F —	FIBER-OPTIC	— S — S —	SEWER MAIN

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SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
EB MD 193 (UNIVERSITY BOULEVARD) AT
SPUR OF WB MD 193 (UNIVERSITY BOULEVARD)

SIGNALIZATION PLAN SHEET

SCALE 1"=20' ADVERTISED DATE SEPT. 1995 CONTRACT NO. M 425-502-370

DESIGNED BY ZAJ COUNTY MONTGOMERY
DRAWN BY ZAJ LOGMILE 15019304.22
CHECKED BY J118
F.A.P. NO. TOD NO.

TS NO. 3533C DRAWING SG-03 OF 04 SHEET NO. OF

APPROVALS

TEAM LEADER
ASST. DIR. CHIEF
DIVISION CHIEF
OFFICE DIRECTOR

REVISIONS

© INSTALL APS CPS ACROSS THE NORTH AND WEST LEGS.
SHA NO. M20249177
STV MCG 12/2009
B REPLACE EXISTING LOOP DETECTION WITH VIDEO DETECTION
SHA NO. A0115185 12/2008
STV MCG
A AS BUILT
M 425-502-370 3/28/97
RAVI

PLOTTED: Monday, February 23, 2009 AT 03:30 PM
FILE: I:\PROJECTS\0312121\0312121_0032\Drawings\TRA\4507 MD 193 at Dennis\PSG-P001_MD193.dgn